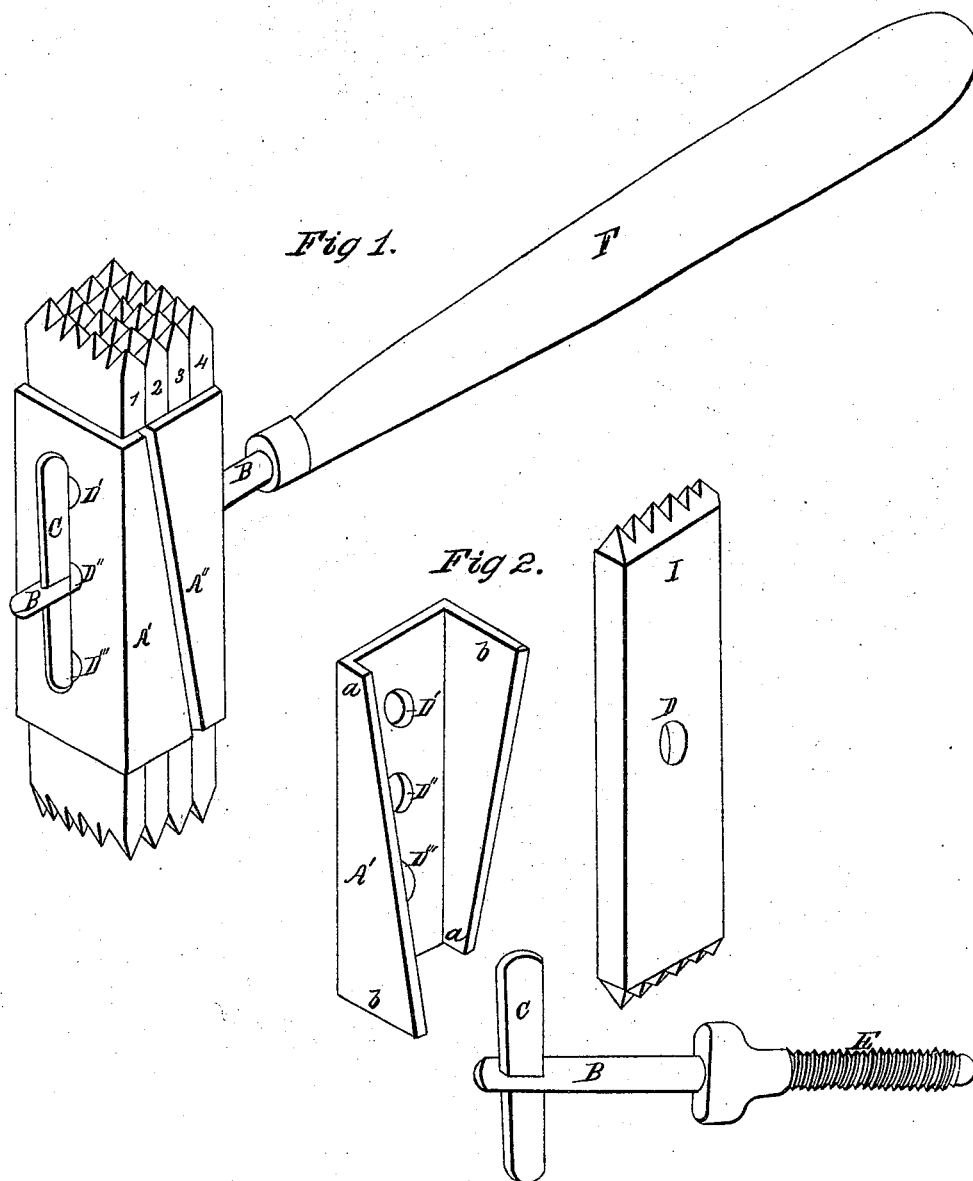


L. Sauer,
Millstone Tool.

N^o 54,258.

Patented Apr. 24, 1866.



Witnesses.

Byrnus Croff
Peter Huber

Inventor.

L. Sauer

UNITED STATES PATENT OFFICE.

LEWIS SAUERS, OF MOUNT JOY, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND H. SHAFFNER, OF SAME PLACE.

IMPROVED FURROWING-HAMMER.

Specification forming part of Letters Patent No. 54,258, dated April 24, 1866.

To all whom it may concern:

Be it known that I, LEWIS SAUERS, of Mount Joy, in the county of Lancaster and State of Pennsylvania, have invented a new and Improved Mode of Constructing Burr or Facing Hammers for Dressing Millstones; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the box-plates A' A'', handle B F, passing through the box-plates, and four bits, 1 2 3 4, secured by a wedge, C, forming the tool complete. Fig. 2 shows one of the box-plates, A', (the counterpart A'' being of the same form reversed,) one of the bits, 1, with its pyramidal points at both ends, and a central hole, D', for the handle to pass through.

The shouldered handle-iron B, with its screw end E and slot and wedge C, so clearly shows the construction as to require but a brief explanation to enable any one skilled in the art to make and use my invention.

The impossibility of tempering a burr-hammer uniformly when made out of a solid piece, the difficulty of sharpening the points when worn blunt, and other objections that will appear in specifying the advantages derived from my mode of structure are self-evident.

By forging the bits 1 2 3 4, or more, of a uniform size—i. e., in length and breadth and thickness—the two bevel sides of the points are also forged and become more compact than when cut out with a chisel, which tends to displace or loosen the texture of the steel, and the intermediate sides of the teeth or points can be easily cut out with a triangular file. These bits can be easily sharpened on two sides on a common grindstone, which is also an advantage, and when slipped over the handle and confined in the box of the two pieces obliquely joined and firmly wedged together the hammer becomes as solid and effectual as if made of one uniform mass, greatly superior, however, in hardness and durability.

The object of making the sides of the box reversibly oblique, so as to unite diagonally, as shown in Fig. 1, is in order to secure a

better hold when the two sides become removed from each other (by inserting an extra bit) to the extent of the thickness of the bit, in which case the central or bit opposite the open suture (if made vertical in a line with the bits) would be liable to swing out of place when heavy blows would be struck; but the suture being diagonal in a reverse position on the opposite sides of the box, all the blades or bits will be supported by the box A' A''. These several box-plates are each provided with three handle-holes, D' D'' D''', the object of which is for the purpose of using up the bits or blades 1 2 3 4, &c., as much as possible, they having but one hole in the center, by inserting the handle into the box by one of the outer holes, D' or D'''. The blades or bits will project on that end to the extent of the distance between said handle-holes. Thus one end can be used up, and by changing the handle to the other outer hole the other end of the blades or bits will now project, and thus a durable, economical burr-hammer of superior quality is furnished.

By removing a few of the blades and inserting blanks a furrowing-hammer is furnished by the same tool. The box-pieces A' A'' and handle B E F will answer for various sizes of blades or entirely new ones when one set is worn out.

I am aware that separate blades have been used in the construction of a mill-pick, in combination with a screw-socket or otherwise, as seen in the patent of J. Richards, February 20, 1838, and that of Joel A. Wheeler, October 4, 1864, neither of which devices I claim as my invention.

The novelty of my invention consists in providing the several blades with central holes for the passage of the handle-shaft; the construction of the two jaws or diagonally-joined box-pieces with their three holes for the change of the handle, with the blades vertically secured between them, by means of a wedge but slightly beveled, which is less liable to be displaced than a screw and more durable and satisfactory—in short, for durability, economy, and facility to change from a burr to a furrowing hammer, presents various features which

are readily appreciated by the millers for dressing stone, and cannot fail to commend itself to all.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A series of bits or blades, 1 2 3 4, or more, provided with a central hole, D, for the reception of a handle, B, constructed in the manner and for the purpose specified.

2. The diagonally-joined box-plates A' A'', provided with three holes, in combination with the blades 1 2 3 4, shouldered handle-iron B E, and wedge C, arranged in the manner and for the purpose specified.

LEWIS SAUERS.

Witnesses:

CYRUS GROFF,
PETER HUBER.